

Strategy Research Project

TOWARD AN ARCTIC STRATEGY

BY

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USAWC STRATEGY RESEARCH PROJECT

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Rising temperatures and a corresponding ice pack melt in the Arctic accelerates to levels not previously envisioned. The rapidly receding polar ice pack opens a new Arctic area of opportunity in ways not witnessed until this century. This emerging area of operations holds new economic opportunity recognized by many nations, but especially Arctic border nations rushing to stake their claims in the Arctic Ocean and its seabed. Despite the accelerating Arctic Rush and its emerging conflicts, the United States lacks a strategy to achieve its interests in the region. This paper provides the foundation for strategy makers to move toward an Arctic strategy. It discusses the major regional stakes and defines Arctic strategic objectives in terms of the most recent executive Arctic policy directive. It examines options for a legal regime to frame the strategy and recommends a combatant command structure that incorporates a circumpolar perspective to maximize unity of effort throughout the Arctic area of operations. In total, this paper aims to spawn vigorous efforts among U.S. leadership to rapidly design and codify a comprehensive strategy to achieve U.S. Arctic objectives.

TOWARD AN ARCTIC STRATEGY

As nations stake claims in a newly accessible frontier, the Arctic Rush—a term to define this century’s upscale version of the Yukon Gold Rush—clearly accelerates! A submarine plants a Russian flag on the Lomonosov Ridge seabed at the North Pole sparking world headlines.¹ Canada’s defense minister plants a Maple Leaf flag on Hans Island, a frozen rock less than one mile in diameter located north of the 80th parallel, countering Danish claims to it as sovereign territory.² The U.S. Mineral Management Service conducts a Chukchi Sea lease lottery that fetches 3,800 percent more revenue than the experts anticipated. The Russian legislature balks at a 1990 deal to cede control of a chunk of the Bering Sea to the United States.³ These events from the past two years illustrate smoldering sovereignty conflicts amid the race for potentially vast resource wealth in an area widely inaccessible until this century. However, despite this Arctic Rush, the United States lacks an Arctic strategy to clarify and achieve its interests in this rapidly emerging area of geopolitical and economic importance.

This paper aims to spark American strategists to build and codify an already “late to need” comprehensive Arctic strategy. It examines two factual cause and effect trends that illustrate the urgent need for this strategy. First, Arctic ice retreat measurements point to increased regional accessibility faster than scientific models predicted earlier this decade. That trend, in turn, encourages previously unforeseen economic, scientific and other activities on America’s increasingly exposed northern flank. The paper then identifies U.S. Arctic objectives (ends) based on the latest executive Arctic policy directive signed by the President. In light of the ends, it then proposes, analyzes and recommends two foundational ways toward an effective Arctic strategy. First, it

proposes that the United States requires legal transparency and should strive for a common international legal regime to stake and defend its Arctic claims and interests. Second, it proposes that the United States requires unified command reorganization to eliminate seams and effectively execute a comprehensive Arctic strategy. When added to the growing body of literature regarding the emerging Arctic's importance, this paper should embolden U.S. leaders to rapidly end the current Arctic strategy void.

Arctic Climate Change

While annual temperatures continue to trend higher in the Arctic region over the last century, the last two decades have shown significant acceleration. While a modest 0.3 degree Celsius increase in northern latitude temperatures occurred from 1900 to 1985, a 0.9 degree Celsius spike occurred after 1985 as depicted in Figure 1. This recent spike triggered Arctic sea ice to melt at an accelerated rate.

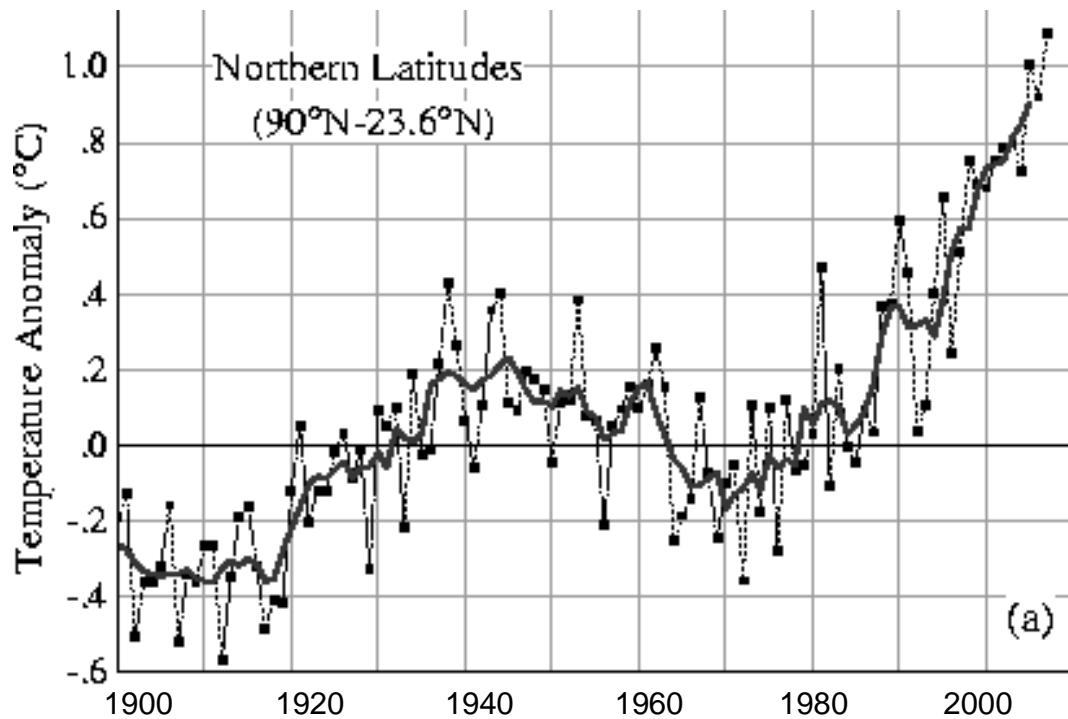


Figure 1. Arctic Temperature Increase⁴

Arctic sea ice, a combination of thicker old ice and thinner new ice, melted faster than predicted by scientific models. For example, the minimum recorded sea ice extent established a new record low in September 2007, and it also culminated well below the 30-year trend line again in 2008. Not only did the minimum area of the ice pack decrease, but also the relative thickness or total volume decreased. The reduced thickness means that melt will occur more easily in following years if temperature trends continue.⁵

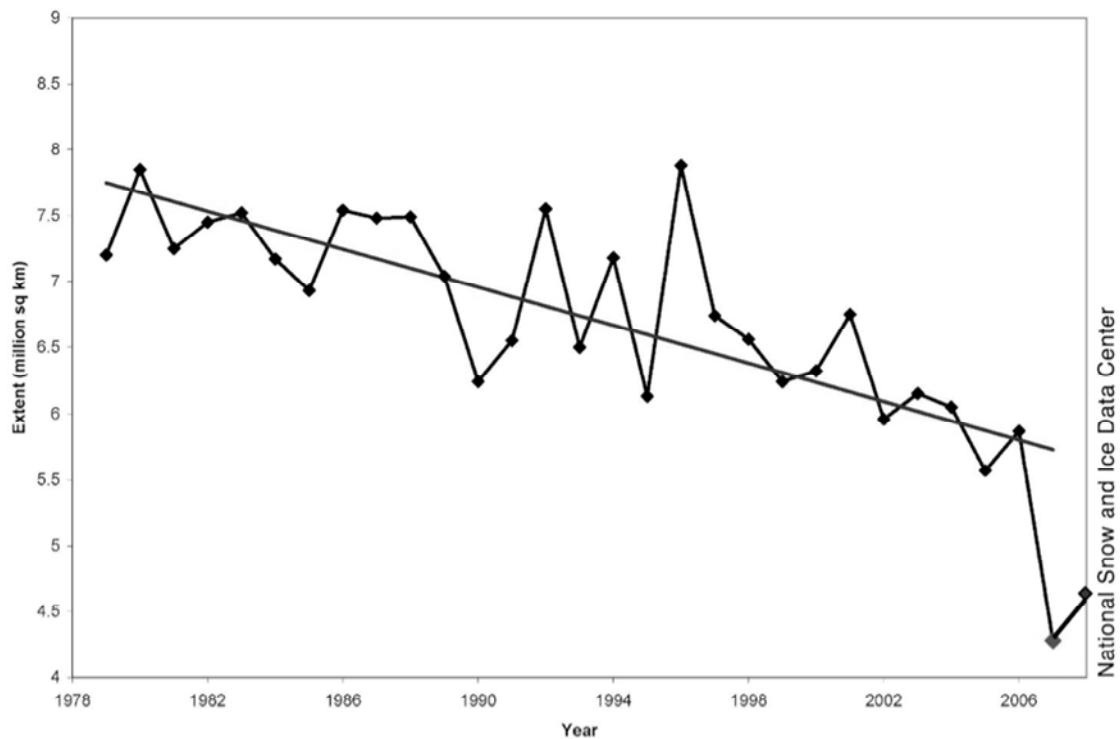


Figure 2. Arctic Sea Ice Extent⁶

Reduced ice pack area translates to less reflected solar energy, which further accelerates the ongoing melting process. Light-colored ice and the white snow covering much of it reflect most of the solar energy striking this mass. As the ice pack melts, it exposes dark blue seawater, which absorbs much of that energy and, in turn, raises seawater temperature. This added energy in Arctic waters then boosts the melting

process, creating a vicious cycle where melting ice causes the remaining ice to melt faster.⁷ Modelers previously agreed that the Arctic Ocean could be seasonally ice free by 2040 to 2050. In December 2007, the updated data swayed Dr. Jay Zwally of NASA's Goddard Space Flight Center to postulate that event could occur as early as 2012, a mere three and a half years from this writing.⁸

Arctic Resources and Traffic

The thawing Arctic ice pack creates economic opportunities that strategists must fully comprehend to appreciate nations' motives to stake claims in this area. Currently, conflicting interests have already generated tensions among five Arctic nations—Canada, Norway, Russia, Denmark and the United States—regarding territorial, maritime and mineral rights.⁹ Further, accelerated ice pack retreat could exacerbate tensions as the area witnesses increased commercial freight shipping, commercial air traffic, adventure cruise tourism, new fisheries activity and intensified geological exploration related to energy resources in the previously overlooked area. These economic activities, examined closely in this section, put pressure on leaders to develop a comprehensive Arctic strategy now.

As seasonal ice melt increases, Arctic shipping routes become accessible for greater portions of each year luring more ships through this area to cut costs. Two fabled routes, the Northwest Passage, which passes through channels between northern Canadian islands and Greenland, and the Northern Sea Route, which traverses waters north of continental Russia, provide paths to reduce shipping times and costs. These savings make shipping through the Arctic attractive to commercial carriers and some military surface vessels during periods of open water or ice thin

enough to traverse with a reinforced hull design. As summer Arctic ice retreats, ships may travel even more directly across extreme northern latitudes to further reduce route distances and associated transit costs or use these routes for longer periods each year.

Commercial freight shipping savings spur great interest since the vast majority of world trade travels via ocean-going vessels. Based on annual tonnage, Asian-European trade involving 20 of the world's top 24 freight ports stand to benefit by shipping through the Arctic region.¹⁰ For example, an ocean voyage from Yokohama, Japan, to Hamburg, Germany via the Northern Sea Route covers approximately 6,920 nautical miles. A trip between the same ports via the Straits of Malacca and Suez Canal, the current preferred route, covers approximately 11,070 nautical miles, costs money to transit the canal, requires exposure to an increasing piracy threat, and may require a delay while waiting to pass through the canal due to traffic. In fact, all voyages between Korean, Japanese and Chinese ports as far south as Hong Kong and all northern European ports as far west as Antwerp, Belgium, realize from 8 percent to over 50 percent distance savings by selecting an Arctic route. Similarly, voyages between Europe and the west coast of North America using Arctic routes stand to save distance and money compared to traversing the Panama Canal. For example, by using the Northwest Passage, voyages between Long Beach and Rotterdam reduce distance by 14 percent and save a canal fee. As the Arctic ice pack retreats toward Greenland, that savings could increase to 24 percent by traveling directly through the Arctic Ocean. In fact all voyages between the U.S. and Canadian west coast ports and northern Europe ports realize significant savings by traversing the Arctic.

Commercial air carriers also seek distance savings as annual cross-polar flight counts trend higher. From 2001 to 2003, annual cross-polar flights numbered between 776 and 884. However, the next year initiated a spike with 2,053 flights in 2004; 3,731 flights in 2005; 5,308 flights in 2006 and 7,291 flights in 2007. In 2008, an estimated 8000-plus cross-polar flights continued the trend.¹¹

Arctic adventure tourism also grows due to an increasingly navigable Arctic. In 2007, the town of Barrow, Alaska, became a cruise destination for adventure tourists for the first time. In 2008, 26 small commercial cruise ships visited Arctic coastal villages in Canada—a new record, up four from 2007—bringing about 3,000 tourists. Meanwhile, about 55,000 tourists cruised to villages in Greenland during 2008, arriving on 2,000-passenger cruise ships.¹²

Arctic climate change creates new fisheries that inevitably bring fishing vessels from around the world. This creates a new need for legal regulation to ensure that migratory fish stocks survive to provide food for indigenous peoples and benefit rightful owners of the territorial waters those stocks traverse. David Biello explains the effects of climate change on fish migration:

...there is a new fishery of sorts opening in the Arctic, thanks to sea ice receding from the north coast of Alaska that is making way for new fish hangouts. Salmon, among other fish, are beginning to show up north of the Bering Strait as they migrate in search of cooler waters that are disappearing in the more southern parts of the ocean.¹³

As of October 2007, commercial vessels already fish in the Barents, Beaufort, Chukchi, Kara and Greenland Seas. To help preserve Arctic fish stocks until fishery organizations develop a comprehensive science-based management plan, the United States Congress passed a joint resolution, signed by the President on June 3, 2008, to stop the expansion of Arctic commercial fishing. The resolution directs the State Department

to begin discussions leading to an international regime for managing commercial fishing in the new habitats.¹⁴ This measure may limit new fishing vessel traffic near Alaska for now, but other boats searching for even more lucrative resources continue to populate the Arctic.

New access to potentially vast oil and natural gas reserves encourages a flurry of geophysical exploration. In Summer 2008, the U.S. Coast Guard (USCG) cutter *Healy* sailed north from Barrow, Alaska, to the Chukchi Cap using an echo sounder to map the sea floor. It made a second voyage in the fall, with the *Louis S. St. Laurent*, a Canadian scientific ship, following closely to measure sediment thickness along the sea floor.¹⁵ Research voyages like these provide critical data for these two nations' governments and for oil and gas companies seeking new deposits. For instance, the U.S. Geological Survey (USGS) appraisal data released in October 2008, suggest approximately 90 billion barrels of oil (BBO), 13 percent of the world's undiscovered total, lies in the Arctic region. Seventy percent of that Arctic total lies in five provinces within nations' economic exclusion zones (EEZs). Of particular interest to the United States, one-third of that Arctic total, approximately 30 BBO, lies within the Arctic Alaska province inside the U.S. EEZ. The same survey reported approximately 1,669 trillion cubic feet (TCF) of natural gas, 30 percent of the world's undiscovered total, lies in the Arctic region.¹⁶

As nations desire increased access to energy reserves, critical in today's global energy environment, competition spawns territorial disputes previously not considered. For example, Denmark and Canada disagree over tiny Hans Island due to its potential mineral reserves, Canada and the United States disagree over a slice of the Beaufort Sea, and Russia and Norway disagree over a Barents Sea boundary. Furthermore,

Russia ceded an 18,000-square-mile piece of the Bering Sea to the United States in 1990, but they never formally ratified the agreement.¹⁷ Now with the greater potential for resource exploitation, many Russian politicians see that agreement as treasonous.¹⁸ Exemplifying Russia's Arctic zeal, on August 3, 2007, a submarine made world headlines by planting a Russian flag on the seabed at the North Pole, making a symbolic claim to the Lomonosov Ridge as an extension of its continental shelf.¹⁹ This new geopolitical competition highlights potential flash points and puts additional pressure on our nation's leaders to develop a U.S. strategy to contend with these and other related issues in this emerging area of importance.

Arctic Strategy Foundations

A successful regional strategy synergistically connects three concepts—ends, means and ways. Ends describe the objectives or goals the strategist must achieve to succeed. Means define the resources—people, equipment, money, infrastructure, *et cetera*—available or required to achieve the objectives. Ways describe the methods or courses of action that employ the means to achieve the ends. To succeed, a strategist must employ methods within the nation's available resources to minimize risk and achieve reasonable objectives just as a banker employs investment vehicles within the company's financial means to limit risk and achieve reasonable profits.²⁰

With this strategy making framework, the first step toward an Arctic strategy requires identifying the United States' objectives (ends) for the region. The National Security Council and Homeland Security Counsel coordinated interagency efforts to draft a joint policy directive identifying U.S. Arctic objectives. National Security Presidential Directive (NSPD)-66 and Homeland Security Presidential Directive (HSPD)-

25, signed by President George W. Bush on January 9, 2009, details U.S. Arctic region objectives and places them in context with broader national objectives. It states six broad objectives:

1. Meet national security and homeland security needs relevant to the Arctic region;
2. Protect the Arctic environment and conserve its biological resources;
3. Ensure that natural resource management and economic development in the region are environmentally sustainable;
4. Strengthen institutions for cooperation among the eight Arctic nations (the United States, Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, and Sweden);
5. Involve the Arctic's indigenous communities in decisions that affect them;
6. Enhance scientific monitoring and research in local regional and global environmental issues.²¹

Strategists now need to build and codify a holistic approach, a framework, to effectively pursue this policy and achieve its multiple objectives (ends) in harmony with other national interests and objectives.²² They need to identify rational ways and reasonable means. Due to the complexity of identifying all ends and ways, this paper's scope is limited to laying a foundation for building that strategy. In the next sections, it proposes and analyzes two required ways—a common international legal regime and new combatant command boundaries—fundamental steps toward building a comprehensive Arctic strategy.

Arctic Legal Regime

The most pressing challenge the United States faces is choosing a way to legally stake and enforce its Arctic territorial claims in order to meet national security, homeland security and economic objectives as stated in the policy. To achieve a

common international legal regime, NSPD-66/HSPD-25 urges the Senate to ratify the United Nations Convention on the Law of the Sea (UNCLOS).²³ However, an opposition group, including recently re-elected Senator Jim Inhofe (R-OK), believes ratification of the current convention gains little, but costs too much. Before determining legal regime options, strategists should carefully examine arguments from both sides of the UNCLOS issue to develop the necessary political consensus on complex national security issues.

Ratification foes for accepting the current UNCLOS treaty provide the following reasons, many with implications beyond the Arctic, to support their opposition. First, some UNCLOS provisions open new avenues for traditionally anti-U.S. environmental groups to affect U.S. policies through domestic or international court actions.²⁴ Second, UNCLOS requires taxable licenses for companies seeking to harvest resources from the seabed beyond the 200-nautical-mile (EEZ), whereas companies may currently do so without a fee. Third, UNCLOS articles regarding intellectual property could force the United States to share some technologies with potential competitor or adversary states.²⁵ Fourth, UNCLOS provisions govern the management of fisheries, overriding some management aspects of sovereign states.²⁶ Fifth, UNCLOS' definitions of internal and archipelagic waters as well as articles defining boarding and investigation may limit U.S. Navy and Coast Guard freedoms to an unacceptable degree, including within the northern Canadian islands.²⁷ Some countries even seek to stake increased sovereignty claims within their EEZs by establishing Particularly Sensitive Sea Areas or Marine Protected Areas that legally compel naval and commercial vessels to avoid these areas.²⁸ Sixth, in case of disputes, the United States should not submit itself to UNCLOS' International Tribunal for the Law of the Sea.²⁹ During testimony before the

Senate Armed Services Committee, former U.N. Ambassador Jeane Kirkpatrick summarized ratification foes' fears by stating that UNCLOS "ratification will diminish our capacity for self-government, including, ultimately, our capacity for self-defense."³⁰

Government advocates for UNCLOS ratification claim that full participation in the treaty fosters peaceful dispute resolution through a common regime and advances American energy business interests. All seven other Arctic nations—Russia, Canada, Denmark, Sweden, Finland, Iceland and Norway—already ratified UNCLOS.³¹ Because of this ratification, those nations may submit their disputes to the International Tribunal for the Law of the Sea for settlement.³² However, disputes between any of those nations and the United States are not subject to the same dispute processes and authorities unless the U.S. Senate ratifies the treaty.³³ Ratification advocates believe that unless the United States ratifies the treaty, it will also lose the claims race for areas of the resource-rich Arctic and will lack representation in various United Nations committees designed to administrate the treaty's broad enterprises.³⁴

Energy companies currently operating on Alaska's North Slope and in the Beaufort Sea who advocate UNCLOS ratification want to extend their drilling fields and exclusively secure the resources along, and eventually beyond, the continental shelf. Exemplifying their enthusiasm, Chukchi Sea leases fetched a record \$2.6 billion at a February 2008 auction.³⁵ UNCLOS provisions allow a nation to claim exclusive seabed mineral rights up to 350 nautical miles from its shoreline if its continental shelf extends beyond the current 200-nautical-mile EEZ (depicted for the United States, Canada, Denmark, Norway and Russia by the bold line in Figure 3). Nations must submit claims for continental shelf rights beyond the 200-nautical-mile limit to the Commission on the

Limits of the Continental Shelf (CLCS).³⁶ Such claims must be submitted within ten years of treaty ratification. They may also apply for licenses to claim mineral resources beyond national limits in the deep seabed through the International Seabed Authority (ISA).

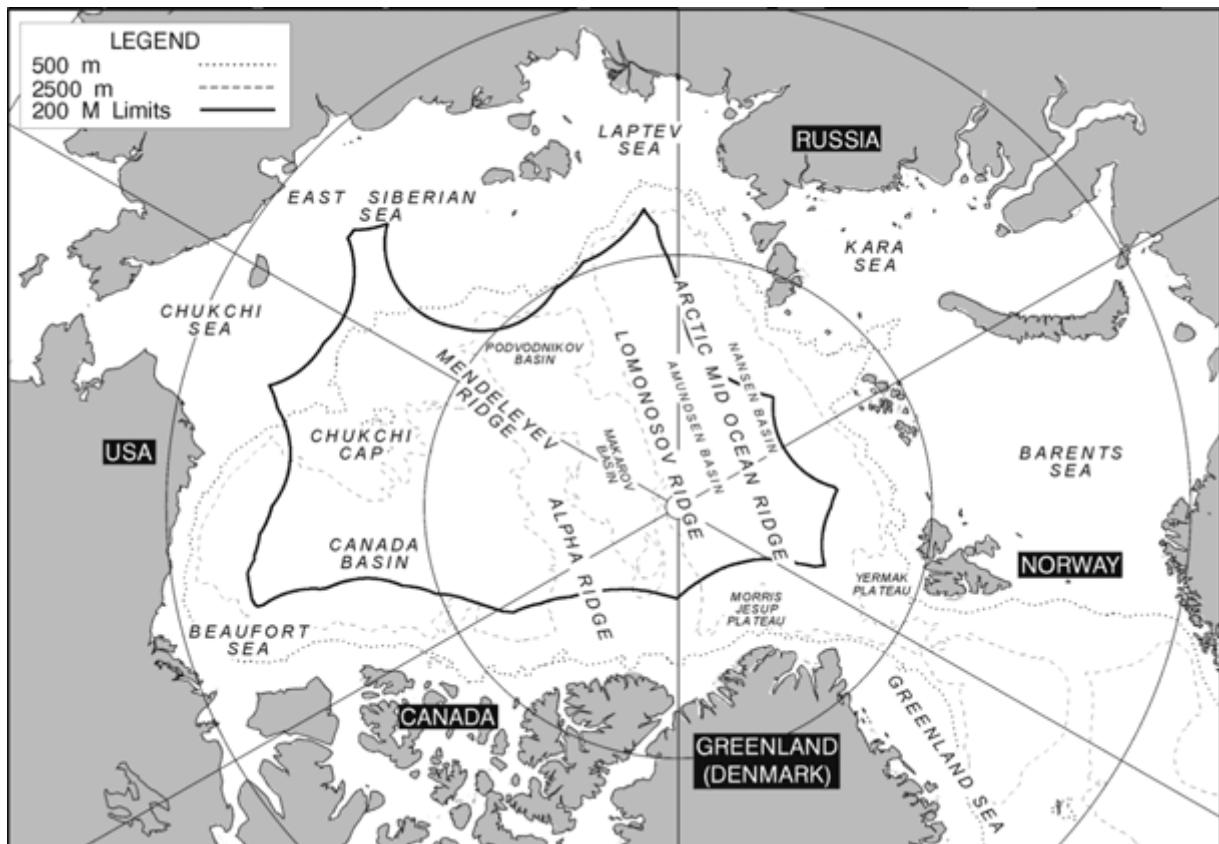


Figure 3. Economic Exclusive Zone Limits³⁷

However, the 2008 USGS data suggest ratification may not be necessary to secure the vast majority of U.S. energy interests. The majority of undiscovered oil and natural gas resources likely lie along the continental shelf, within nations' current EEZs, rendering claims to the CLCS and ISA unnecessary to harvest those resources.³⁸ The Arctic Alaska province contains 30 BBO and 221 TCF of natural gas, all within the U.S. EEZ. The province also likely contains an undiscovered 5.9 billion barrels of natural gas

liquids (BNGL). All total, the estimated sum of undiscovered energy in the province equals 72.77 billion barrels of oil and oil-equivalent natural gas (BOE).³⁹ Claims submitted under UNCLOS provisions could increase the U.S. stake for resources in only one area, the Amerasian Basin province, to a limited degree. The USGS study indicates that 9.7 BBO, 56.89 TCF of natural gas, and 0.54 BNGL lie undiscovered in the province. However, the highest concentrations of these resources likely exist along the Canadian and U.S. (Alaskan) continental shelves. Compared to the 72.77 BOE suspected to lie within the Arctic Alaska province, 19.75 BOE likely lies within the Amerasian Basin. The vast majority of that 19.75 BOE lies within the Canadian and U.S. EEZs, therefore little remains available for the United States to claim.⁴⁰ A U.S. claim submission to the CLCS to extend economic rights could increase total U.S. energy reserves, but only by a minuscule amount according to the most current USGS appraisal. Additionally, under UNCLOS, a claim beyond the current U.S. EEZ would require a license fee, making the scant amount of additional resources even less economically attractive.⁴¹

The United States also needs to carefully measure the effectiveness of UNCLOS in its current form to meet U.S. Arctic policy objectives without jeopardizing other national interests and objectives abroad. Freedom of navigation issues, for example, put NSPD-66/HSPD-25 objectives at odds with its own recommendations. While the joint policy directive recommends ratifying UNCLOS, it also explicitly seeks to preserve U.S. freedom of navigation “rights throughout the world, including through strategic straits” and claims the “regime of transit passage” for international navigation through the Northwest Passage and Northern Sea Route.⁴² Canada, meanwhile, invokes U.N.

rulings in other parts of the world to justify claiming portions of the Northwest Passage as internal waters.⁴³ In this light, building the legal regime strategy block requires a cautious balancing act to maximize achievement of all U.S. interests.⁴⁴

Having examined the UNCLOS arguments, it is time to analyze the three options that use UNCLOS as the basis for a legal regime. In Option 1 (Modification), the United States seeks to modify, then ratify the convention. In Option 2 (Ratification), the U.S. Senate ratifies UNCLOS in its current form. In Option 3 (Codification), the United States defines and codifies which provisions it treats as customary international law.

Option 1, the most complex, requires modification submissions to the United Nations that may or may not prove acceptable to UNCLOS signatory nations. This process would likely be lengthy based on standard U.N. consensus building practices. The United States would require a special team of subject matter experts from each of the disputed topic areas to address all of the issues previously discussed. To gain greater bipartisan consensus, the team should also include knowledgeable representatives from Senator Inhofe's and other ratification foes' offices and appropriate legal experts. The team must thoroughly review all UNCLOS provisions questioned by ratification foes and then codify a comprehensive and detailed update proposal to the convention that will gain U.S. Senate support.

All six issues previously identified by ratification opponents need to be addressed by examining and, where required, amending UNCLOS articles. Fees and taxes listed in Article 82 require elimination for U.S. businesses to avoid unfavorable treatment with respect to businesses of developing nations. Transfer of technology provisions listed in Article 144 require modification to avoid mandates of U.S. technology transfer,

especially dual-use technology transfer, to potentially anti-U.S. or rogue actors. Articles 61 through 69 require modification to preclude sovereignty infractions regarding U.S. EEZ fisheries and marine life harvests. Articles 47 through 53 require clarification or changes in order to not limit naval vessels' practices deemed vital to U.S. security. Articles 224 through 227 require review to ensure USCG and Navy operations are not unduly impeded, especially in an era of active counter-proliferation and increased piracy. Article 236 needs legal review to ensure, and perhaps broaden, USCG and Navy vessels' immunity from UNCLOS legal provisions. Finally, Part XI of UNCLOS requires a thorough review and modifications to prevent international authorities, courts and tribunals from unduly overriding U.S. sovereignty.

If the team's proposed adjustments, approved by appropriate U.S. authorities, prove acceptable to the United Nations, then the U.S. Senate should ratify the modified UNCLOS and the United States recognize all provisions as treaty law. This provides a common legal regime for all Arctic nations to stake claims and enforce the rule of law in this rapidly emerging region of importance. This option, though the most time-consuming and potentially difficult to achieve, provides a path to minimum conflict and maximum international legitimacy. Fundamentally, it fully achieves all related U.S. Arctic policy objectives to the maximum extent possible.

Option 2 requires U.S. Senate ratification of the current treaty, but may prove politically difficult to obtain because senate ratification requires 67 votes, and this support may not currently be available. If ratified, UNCLOS becomes treaty law common to all ratifying nations. Option 2 also maximizes the potential of U.S. energy interests in the Arctic, but cedes aspects of U.S. sovereignty throughout the world in

some of its articles as mentioned earlier. While most U.S. government agencies recommend treaty ratification, political sensitivities as espoused by Senator Inhofe and his supporters may prevent or at least delay it. It remains to be seen if the 2009 presidential administration and congressional changes will overcome the opposition.

Option 3 achieves most, if not all, U.S. economic objectives according to the most recent USGS data and protects U.S. sovereignty, but falls short of providing an international legal regime completely common to all Arctic states. The United States already treats most UNCLOS provisions as customary international law. This option maintains the status quo, but requires the United States to codify which UNCLOS provisions it recognizes as law and which provisions it rejects in order to provide legal transparency in lieu of a completely common legal regime. With Option 3, the United States continues to pursue all resources within its EEZ and operate abroad as it currently does without ceding sovereignty. It simultaneously pursues bilateral agreements with Russia and Canada to resolve its Bering Strait and Beaufort Sea disputes, respectively, with each nation.

This option potentially casts the United States as a “unilateralist” nation since it does not achieve the common legal regime championed by the United Nations and those nations who have already ratified the measure. It could reinforce a negative image among certain governments and anti-U.S. groups. For example, these actors may disparage the United States in the same manner they do regarding the Kyoto protocols.

While Option 3 does not create a common international legal regime, it does clarify America’s view and buys time to pursue Option 1. This transparency could

alleviate potential conflicts regarding territorial and resource claims in the Arctic and naval freedoms throughout the world. At least other nations would know the United States' position regarding every UNCLOS provision. Option 3 provides flexibility since it may represent the United States' final position regarding UNCLOS or just fill the gap until achieving Option 1 in the future. It could be a steppingstone while seeking a politically acceptable option that better achieves a common legal regime.

Based on the preceding analysis, this paper recommends Option 1 (Modification). It provides the best solution using UNCLOS as a foundation to provide a legal regime for an Arctic strategy. It maximizes U.S. energy and sovereignty objectives at stake while achieving a common international legal regime that is politically acceptable. The other two options fall short. Option 3 (Codification) nearly maximizes U.S. energy objectives while maintaining sovereignty, but fails to provide a truly common legal regime. In the interim, however, Option 3 could possibly be used to minimize potential conflicts while pursuing Option 1. Finally, Option 2 (Ratification) maximizes U.S. energy interests and legal regime compatibility, but the expense of ceding sovereignty makes it politically unpopular and strategically inferior. It clearly provides the least favorable solution. In fact, Option 2 would likely hinder achieving some of the global objectives explained in NSPD-66/HSPD-25.

Arctic Unity of Effort

While congressional leadership determines a legal regime, Defense Department strategy makers must enable unity of effort in the emerging Arctic area of operations (AO) leveraging existing relationships and missions. Joint doctrine recommends that a single commander conduct unified action—the synchronizing, coordinating and

integrating of all activities—to best achieve unity of effort. This unity of command joint tenet, when employed within a geographic area, maximizes peacetime engagement efforts and wartime combat effectiveness by exposing minimum seams, or lines of coordination between commanders, for nonintegrated action or enemy exploitation. The three related joint doctrine principles—unified action, unity of effort and unity of command—share a common root word and theme.⁴⁵ They suggest that a united geographic area commanded by a single person presents the best option for national strategic success within that area. This theorem resonates throughout joint planning publications and defines the primary objective in searching for a Unified Command Plan (UCP) option to best serve U.S. Arctic objectives. Unfortunately, an active AO encompassing the Arctic warranted little consideration until the last half of this decade.

A circumpolar view of the world identifies the boundaries of three combatant commands illogically meeting in the Arctic (see Figure 4). Drafters of the 2006 UCP viewed U.S. European Command (USEUCOM), U.S. Pacific Command (USPACOM) and U.S. Northern Command (USNORTHCOM) areas of responsibility (AORs) from the equator. They made geographic divisions in the Arctic Ocean along lines of longitude without holistically considering the Arctic's potential for increased activity and conflict. Geographic combatant command boundaries that extrapolate to the North Pole make Arctic unity of command impossible and unified of effort more difficult, since actions require extra and inefficient coordination. Alaska's unique placement in both USPACOM and USNORTHCOM for various functions only adds to the inefficiency. Based on this paper's broader geopolitical perspective of the Arctic, military planners must now reconsider how to best achieve Arctic unity of effort in a new strategy.



Figure 4. Unified Command Plan 2006 Boundaries⁴⁶

To fix the current problem, two primary UCP options exist that correspond to the Arctic land masses assigned to USEUCOM and USNORTHCOM. Option 1 adds the Arctic Ocean to the USEUCOM AOR, logically aligning it with existing North Atlantic Treaty Organization (NATO) missions. Option 2, adds a larger Arctic area to USNORTHCOM and assigns Alaska exclusively to USNORTHCOM. This option logically aligns the Arctic with existing North American Aerospace Defense Command (NORAD) and homeland defense missions bilaterally executed by the United States and Canada.

Option 1 adds all of the Arctic Ocean to the current USEUCOM area. This new USEUCOM-USNORTHCOM border would extend from its current position at the 48th parallel, along the 48th parallel to the eastern tip of Newfoundland. It follows the northern Canadian and Alaskan borders. The new USEUCOM-USPACOM border crosses the Bearing Strait along the 65th parallel. This new geographic designation leaves all nations' land territories within their current U.S. combatant command boundaries to minimize effects outside the Arctic region.

This option acknowledges recent and existing positive relationships between all eight Arctic nations within in the realm of NATO. Five Arctic nations—the United States, Canada, Denmark (Greenland), Iceland and Norway—are NATO members. Finland, Sweden and Russia are signatory members of the NATO Partnership for Peace.⁴⁷ Until renouncing all ties with NATO in August 2008, Russia also participated in the NATO-Russia Council, a 2002 agreement for special cooperation.⁴⁸ USEUCOM still leads U.S. military efforts to build better relations with Russia and all other Arctic nations except Canada. This option leverages USEUCOM's engagement efforts with a re-emerging Russia to maintain peace and solve sovereignty issues in light of Arctic Rush tensions. While this option optimizes Russian engagement and unifies the Arctic Ocean within a single combatant command, it falls short of optimum Arctic unity.

Option 1 cannot solve the unique status of Alaska. By omitting Alaska and its surrounding waters south of the Bearing Strait, not all Arctic region missions fall under the same combatant commander. For instance, the US Coast Guard District 17's area of operations (AO) intuitively includes the waters surrounding all of Alaska for its homeland defense mission. Splitting its AO between two combatant commands in a new construct creates a new seam for the USCG to straddle. Conversely, moving the proposed USPACOM-USEUCOM border south to the 50th parallel and including Alaska and its surrounding waters creates a seam between USEUCOM and USNORTHCOM regarding Alaska's homeland defense mission. This seam is similar to the one that currently exists between USPACOM and USNORTHCOM—a shortfall rectified by Option 2.

Option 2 adds most of the Arctic Ocean to the current USNORTHCOM AOR while requiring that USPACOM relinquish Alaska and some northern waters. In this option USNORTHCOM assumes all Alaskan Command and Joint Task Force Alaska missions. The new USPACOM-USNORTHCOM border would extend from its current northeast point along the 50th parallel to the southern tip of the mainland Kamchatka Peninsula. The new USEUCOM-USNORTHCOM border would stretch from its current position on northern Greenland east along the coast to the northeast tip of Greenland.⁴⁹ It then would proceed to the northern tips of Svalbard, Franz Josef Land, Severnaya, the New Siberian Islands and Wrangel Island. Then it would follow the Wrangel Island shore east to its eastern most point before proceeding due south to the Russian mainland. This option's geographic boundaries once again leave all nations' land territories within their current U.S. combatant command to minimize effects outside the Arctic region.

This paper recommends Option 2 because it maximizes the synergy of all three joint principles—unity of command controlling unified action to achieve unity of effort. It eliminates currently required lines of coordination to achieve effective peacetime engagement and, if required, to execute effective wartime operations throughout most of the Arctic. Under this option the USNORTHCOM commander maintains sole responsibility for the vast majority of Arctic operations. By contrast, the 2006 UCP requires coordination of Arctic Ocean efforts, peaceful or otherwise, between three combatant commands. For example, defense of some Alaska-based assets, such as the U.S. Navy's Sea-based X-band (SBX) radar platform when moored near Adak, does not currently fall to the same commander that utilizes its capabilities. In Option 2, once

the SBX crosses the USPACOM-USNORTHCOM boundary, all employment and defense facets regarding that asset ultimately rest with the USNORTHCOM commander (supported by U.S. Strategic Command).⁵⁰

Option 2 also leverages existing bi-national missions and engagement efforts. All sectors of NORAD—Alaskan NORAD Region, Canadian NORAD Region and Continental United States NORAD Region—coordinate air defense operations within and around U.S. and Canadian airspace that overlies the proposed USNORTHCOM AO. The USNORTHCOM commander doubles as the NORAD commander and maintains ultimate responsibility for air defense operations. He also coordinates with Canadian Command (CANCOM) to plan for bi-national land and maritime defense within the geographic area under NORAD airspace.⁵¹

An added benefit is that Option 2 best positions the United States to engage Russia. Recent events suggest that while the United States must engage all Arctic neighbors to achieve its interests in a peaceful manner, a unified effort to engage a resurgent Russia appears to beg most efforts. During 2007, NORAD conducted Russian Long Range Aviation (LRA) intercept missions at a pace not seen since the Cold War.⁵² In March 2008, USNORTHCOM and NORAD initiated joint Russian-U.S. exercises to mitigate tensions and foster new dialogue. Meanwhile, the USCG District 17 commander (currently the *de facto* Joint Forces Maritime Component Commander to Joint Task Force Alaska) fosters an ongoing relationship with his Russian counterpart organization—the Northeast Border Guard Directorate.⁵³ Recently, USCG Pacific Area (PACAREA), the parent organization of District 17, elevated that bilateral relationship to the next level. PACAREA formed a new bilateral relationship with the Border Guard's

parent organization, the Federal Security Service of Russia's Far East Directorate (FED). Regular meetings between these organizations foster a dialog regarding maritime concerns of both nations including defense of both homelands.⁵⁴

In summary, the Option 2 UCP change advocated by this paper solidifies Arctic unity of effort under USNORTHCOM throughout the Arctic AO. These blossoming military-to-military security cooperation efforts that already exist within USNORTHCOM formally and informally related organizations directly support NSPD-66/HSPD-25 objectives. They provide outstanding examples that should be replicated under the direction of a single combatant commander by establishing a formal relationship across interagency lines between USNORTHCOM and USCG District 17. Such unity of effort forms a cornerstone for building peaceful solutions to the smoldering conflicts resulting from the Arctic Rush.

Conclusion

The rapidly receding polar ice pack opens a new Arctic area of opportunity in ways not witnessed until the beginning of this century. This emerging AO holds new economic opportunity recognized by many nations, but especially by those nations bordering the region rushing to stake their claims in the Arctic Ocean and its seabed. Despite the accelerating Arctic Rush and its emerging conflicts, the United States lacks an overall comprehensive strategy to fully achieve its national interests in the region.

This paper provides the foundation for strategy makers to move toward an Arctic strategy. It examines the major regional stakes primarily related to economic opportunities created by climate change. Using the newly approved Arctic objectives identified in NSPD-66/HSPD-25, it analyzes three legal regime options and two

combatant command options. It then recommends modifying UNCLOS to achieve a common international legal regime and modifying the UCP to incorporate a circumpolar perspective for maximizing unity of effort throughout this emerging region of importance. In total, this paper aims to spawn vigorous efforts to rapidly design and codify a comprehensive strategy to achieve U.S. Arctic objectives.

Endnotes

¹ Zachary Coile, "Rush to Arctic as warming opens oil deposits," SFGate, August 12, 2008, <http://www.sfgate.com/cgi-bin/article.cgi?file=/c/a/2008/08/12/MN5R1290QE.DTL> (accessed January 22, 2009).

² Matthew Carnaghan and Allison Goody, *Canadian Arctic Sovereignty*, Parliamentary Information and Research Service (Ottawa, ON: Library of Parliament, January 26, 2006), 5.

³ Anthony L. Russell, "Carpe DIEM: Seizing Strategic Opportunity in the Arctic," *Joint Forces Quarterly* 51 (4th Quarter 2008): 96-97.

⁴ For more details regarding land and sea surface temperature change see complete set of charts from NASA's Goddard Institute for Space Studies (GISS). This graph is part of the GISS data set "Annual Mean Temperature Change for Three Latitude Bands" updated January 11, 2008, <http://data.giss.nasa.gov/gistemp/graphs/> (accessed September 16, 2008).

⁵ World Wildlife Fund, "Arctic Sea Ice At Lowest Recorded Level Ever," *ScienceDaily*, September 16, 2008, <http://www.sciencedaily.com/releases/2008/09/080915162428.htm> (accessed January 22, 2009).

⁶ This National Snow and Ice Data Center (NSIDC) graphic is modified to show the 2008 minimum sea ice extent as reported by NSIDC on September 16, 2008. The original graph is available at http://nsidc.org/news/press/2007_seaiceminimum/20071001_pressrelease.html and the updated data press release is available at <http://nsidc.org/arcticseaicenews/> (accessed September 16, 2008).

⁷ Ibid.

⁸ Seth Borenstein, "Arctic Sea Ice Gone in Summer Within Five Years?" *National Geographic*, December 12, 2007, <http://news.nationalgeographic.com/news/2007/12/071212-AP-arctic-melt.html> (accessed January 22, 2009).

⁹ Caitlin Harrington, "Eyeing up the new Arctic," *Jane's Defence Weekly* 45, no. 3 (January 16, 2008): 24.

¹⁰ Data from 2006 spreadsheet compiled by American Association of Port Authorities, "World Port Rankings - 2006," http://aapa.files.cms-plus.com/Statistics/worldportrankings_2006.xls (accessed November 17, 2008).

¹¹ Douglas M. Fraser, "National Security Implications of Change in the Arctic," briefing slides with notes, Elmendorf Air Force Base, AK, Alaskan Command, March 20, 2008.

¹² Bob Weber, "Record number of cruise ships in Canadian Arctic this summer," August 17, 2008, CNews, <http://cnews.canoe.ca/CNEWS/Canada/2008/08/17/6482116-cp.html> (accessed January 24, 2009).

¹³ David Biello, "Preserving Arctic Fisheries Before Harvesting Them," *Scientific American*, April 29, 2008. <http://www.sciam.com/article.cfm?id=preserving-arctic-fisheries-before-harvesting-them> (accessed January 22, 2009).

¹⁴ S.J. Res. 17, Public Law 110-243, 110th Cong., 2nd sess. (June 3, 2008).

¹⁵ Coile, "Rush to Arctic as warming opens oil deposits."

¹⁶ United States Geological Survey, "Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle," <http://pubs.usgs.gov/fs/2008/3049/fs2008-3049.pdf> (accessed November 10, 2008).

¹⁷ Harrington, "Eyeing up the new Arctic," 24.

¹⁸ Russell, "Carpe DIEM: Seizing Strategic Opportunity in the Arctic," 97.

¹⁹ Coile, "Rush to Arctic as warming opens oil deposits."

²⁰ Harry R. Yarger, "Toward a Theory of Strategy: Art Lykke and the U.S. Army War College Strategy Model" in *U.S. Army War College Guide to National Security Issues, Vol. 1: Theory of War and Strategy*, ed. J. Boone Bartholomees, Jr. (Carlisle Barracks, PA: Strategic Studies Institute, June 2008), 43, 47-48.

²¹ National Security Presidential Directive (NSPD)-66/Homeland Security Presidential Directive (HSPD)-25, sec. III-A.

²² Richard L. Kugler, *Policy Analysis in National Security Affairs: New Methods for a New Era* (Washington, DC: National Defense University Press, 2006), 64.

²³ NSPD-66/HSPD-25, sec. III-C-4.

²⁴ Lawrence A. Kogan, "UNCLOS Alchemy," November 2, 2008, linked from The Minority Report, http://www.theminorityreportblog.com/story/steven_foley/2007/11/02/unclos_alchemy_law_of_the_sea_treaty (accessed November 10, 2008).

²⁵ James Inhofe, "Law of the Sea Treaty," September 25, 2008, http://inhofe.senate.gov/public/index.cfm?FuseAction=PressRoom.JimsJournal&ContentRecord_id=9a3ef095-802a-23ad-4378-0fd106a07c07&Region_id=&Issue_id= (accessed November 10, 2008).

²⁶ United Nations Convention on the Law of the Sea, art. 61-69.

²⁷ Ibid., art. 8, 17-23, 27-31, 38, 39, 46-53, 224-227, 236. See also Kogan, “UNCLOS Alchemy.”

²⁸ Kogan, “UNCLOS Alchemy.”

²⁹ Inhofe, “Law of the Sea Treaty.”

³⁰ Jeane J. Kirkpatrick, “Testimony before the Senate Armed Services Committee,” April 8, 2004, <http://armed-services.senate.gov/statemnt/2004/April/Kirkpatrick.pdf> (accessed November 10, 2008).

³¹ United Nations Division for Ocean Affairs and the Law of the Sea, “Chronological lists of ratifications,” December 31, 2008, http://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm (accessed January 24, 2009).

³² United Nations Convention on the Law of the Sea, art. 287.

³³ Harrington, “Eyeing up the new Arctic,” 24.

³⁴ Edwin Meese III, Baker Spring, and Brett D. Schaefer, “The United Nations Convention on the Law of the Sea: The Risks Outweigh the Benefits,” *The Heritage Foundation*, May 16, 2007, <http://www.heritage.org/research/internationalorganizations/wm1459.cfm> (accessed January 24, 2009).

³⁵ Russell, “Carpe DIEM: Seizing Strategic Opportunity in the Arctic,” 96.

³⁶ United Nations Convention on the Law of the Sea, art. 76.

³⁷ Ron Macnab, Paul Neto, Rob van de Poll, “Cooperative Preparations For Determining the Outer Limit of the Juridical Continental Shelf in the Arctic Ocean: A Model for Regional Collaboration in Other Parts of the World?” *IBRU Boundary and Security Bulletin* 9, no. 1 (Spring 2001): 87.

³⁸ Geologist Daniel L. Gautier quoted by Jad Mouawad, “Oil Survey Says Arctic Has Riches,” July 24, 2008, http://www.nytimes.com/2008/07/24/business/24arctic.html?_r=2&oref=slogin&oref=slogin (accessed November 10, 2008).

³⁹ United States Geological Survey, “Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle.”

⁴⁰ Ibid.

⁴¹ United Nations Convention on the Law of the Sea, art. 82.

⁴² NSPD-66/HSPD-25, sec. III-B-5.

⁴³ Carnaghan and Goody, *Canadian Arctic Sovereignty*, 3-4.

⁴⁴ For a detailed explanation of the challenges faced by strategists to create effective national strategy harmonizing multiple policies in a complex world, see Kugler, *Policy Analysis in National Security Affairs: New Methods for a New Era*, 61-72.

⁴⁵ U.S. Joint Chiefs of Staff, *Doctrine for the Armed Forces of the United States*, Joint Publication 1 (Washington, DC: U.S. Joint Chiefs of Staff, May 14, 2007), II-2 and II-3.

⁴⁶ George W. Bush, *Unified Command Plan* (Washington, DC: The White House, May 5, 2006), Tab.

⁴⁷ NATO, "Partnerships," April 21, 2008, <http://www.nato.int/pfp/sig-cntr.htm> (accessed January 24, 2009).

⁴⁸ Associated Press, "NATO Says Russia Has Cut All Military Ties With Western Alliance," FoxNews.com, August 21, 2008, <http://www.foxnews.com/story/0,2933,408083,00.html> (accessed January 24, 2009).

⁴⁹ Bush, *Unified Command Plan*, B-2.

⁵⁰ Ibid, 13.

⁵¹ Ibid, 10.

⁵² Bruce Finley, "Russian bomber flights alarm NORAD," *dispatch.com*, March 11, 2008, http://www.dispatch.com/live/content/national_world/stories/2008/03/11/norad.html?sid=101 (accessed January 24, 2009).

⁵³ The Alaskan Command (ALCOM) staff recommended establishing a formal JFMCC relationship for USCG District 17 under ALCOM in 2007 since no naval maritime assets are assigned to the area. See Neil Holland and Gary Hoff, "Alaska Command Relations," briefing slides with notes, Elmendorf Air Force Base, AK, Alaskan Command, August 29, 2007. The District 17 commander actually represented Joint Task Force Alaska as the de facto JFMCC at a USNORTHCOM conference following that recommendation. This paper recommends formalizing an interagency relationship between USNORTHCOM and the USCG across Department of Defense and Department of Homeland Security lines to promote unified action.

⁵⁴ Douglas M. Fraser, "National Security Implications of Change in the Arctic."

